United States Patent

[11] 3,602,914

[72] Inventor **Leo J. Castello**
3702 Burnett Lane, Huntingdon Valley, Pa. 19006

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[45] Patented **Sept. 7, 1971**

[54] **METHOD OF SWEATER FABRICATION**
5 Claims, 11 Drawing Figs.

[52] **U.S. Cl.** **2/90**, 2/243, 2/247, 66/172, 66/196
[51] **Int. Cl.** **A41d 1/04**
[50] **Field of Search** ..... 2/243, 243 B, 90, 91, 98, 116, 129; 66/170, 171, 172, 176, 196

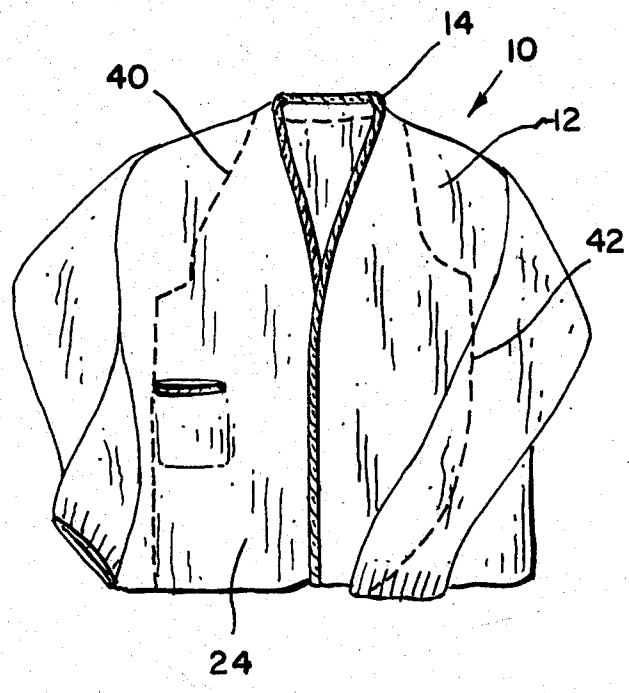
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Primary Examiner—H. Hampton Hunter
Attorney—Karl L. Spivak

ABSTRACT: A method of fabricating a knitted panel or strip for use in manufacturing sweaters of the button or zipper-front type having a continuous knit on border with no seams on the neckline including the steps of knitting strips of cloth on a circular or flat bed machine having a continuous border at one edge thereof, folding the cloth double and placing a pattern thereon, cutting the doubled cloth to the pattern without interfering with the continuity of the border at the folded portion thereof, said border constituting said continuous knit on border in a sweater which is finished by utilizing the required cutting and sewing operations. The invention further includes the method of fabricating a knit pocket in the knit panel or strip including the steps of knitting an enclosed tubular stitch or pocket which is completely closed on all sides, utilizing any desired stitch to knit portions of said panel which extend from all sides surrounding said tubular stitch, severing the last course on top of said tubular pocket from the first needle or wale of said tubular course to the last needle or wale of said tubular course on one side only to provide a pocket opening, and applying any type of welt or edging to the marginal front edge of the pocket defined by the cut course.



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SHEET 1 OF 2

Fig. 1

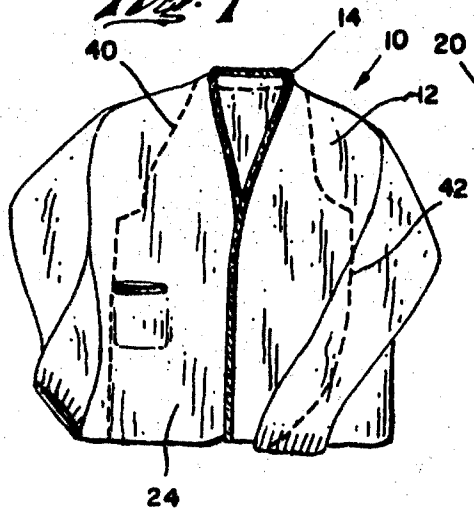


Fig. 3

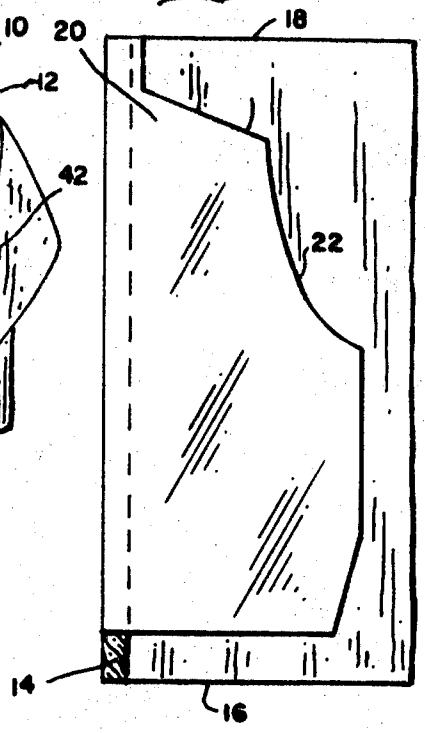


Fig. 4

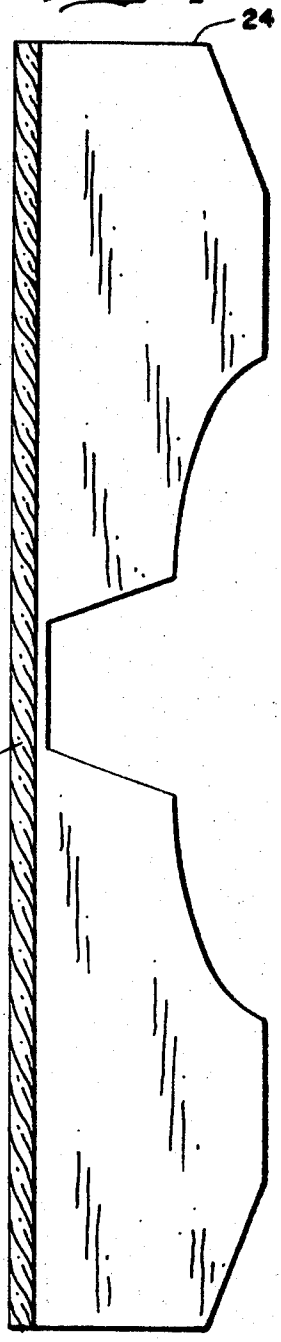
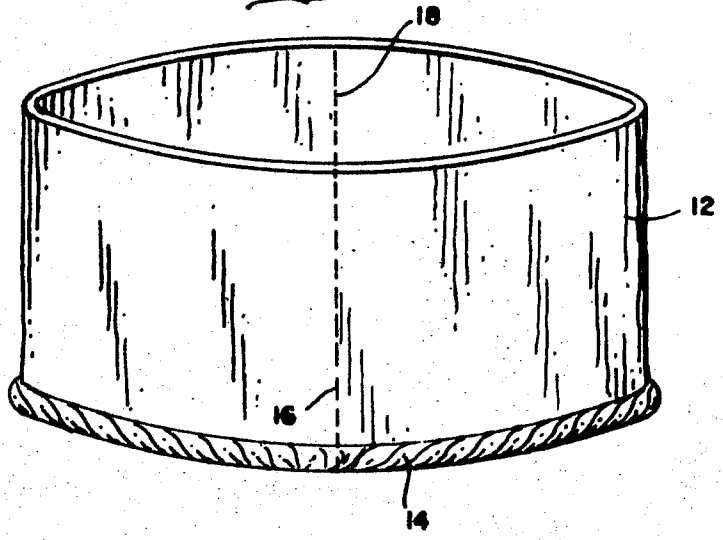


Fig. 2



INVENTOR
Leo J. Castello

BY Karl L. Spivak
ATTORNEY

FIG. 5

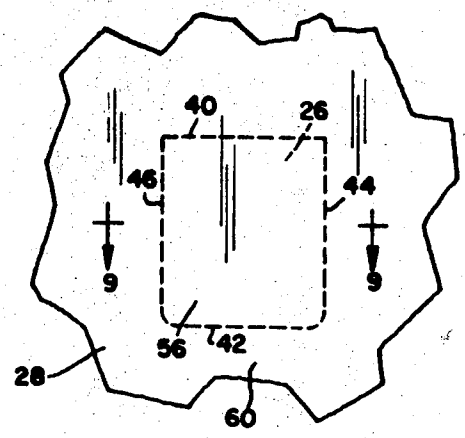


FIG. 6

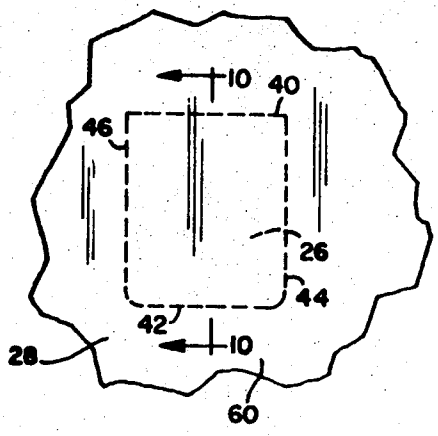


FIG. 10

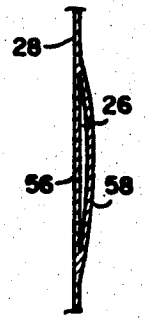
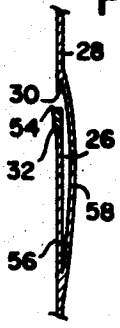


FIG. 11



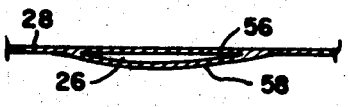


FIG. 9

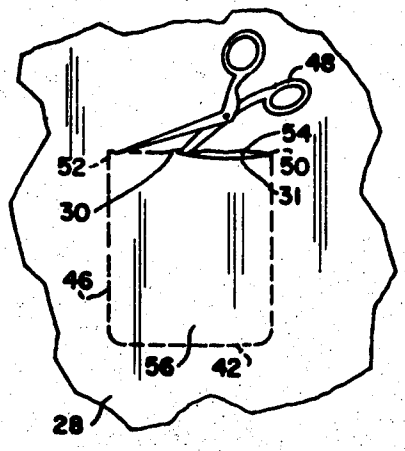


FIG. 7

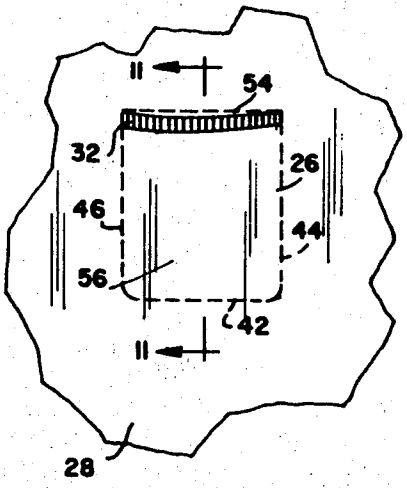


FIG. 8

INVENTOR
LEO J. CASTELLO

BY Karl L Spivak

ATTORNEY

METHOD OF SWEATER FABRICATION

BACKGROUND OF THE INVENTION

This invention relates to a method of fabricating knit panels for use in manufacturing sweaters of the button- or zipper-front type having a knit-on border, and more particularly to the method of fabricating a knit panel having a continuous knit-on border having no seams on the neckline. In addition, the invention relates to a method of fabricating knit articles having knit-in pockets, and more particularly, to a method of fabricating a knit-in pocket which eliminates the conventional dangling-type pocket or sewn-in patch pocket.

In knitting sweaters of the button- or zipper-front type, it has been the practice to fabricate the border which extends around the neck and down the front edge of the sweater from more than one knit panel and then to sew, or knit, the panels together to provide a continuous border. This practice results in seams on the neckline which detract from the aesthetic effects of the sweater, as well as requiring expensive and time-consuming connection operations to finish the sweater in a manner that will be acceptable to the public.

The most common method of providing knit-in pockets in knit garments, such as sweaters, shirts, vests, dresses, scarfs, and the like, has been to connect a seperate tubular pocket to the inside of the garment, and then to slit said garment to provide an opening therein, or to knit said garment with an opening therein to provide access to said pocket. When utilizing this method, the garment is three layers thick in the pocket region (the outside layer of the garment and the two layers defining the pocket) and only one layer thick in other regions. This variation in thickness, or bulk, detracts from the aesthetic effect of the garment. Also, pockets of the above-mentioned type are supported by the garment only along the upper edges thereof where they are connected to the upper and lower margins defining the opening into the pocket. After continued use, the marginal edges which define the opening into the pocket tend to gap widely because such edges are the only portion of the sweater which support the pocket.

SUMMARY OF THE INVENTION

The present invention resides in a novel method of fabricating a knit panel for use in manufacturing sweaters of the button- or zipper-front type wherein a border extending around the neck and down the front edge of the sweater is defined by one edge of the knit panel. This construction eliminates unsightly seams on the neckline and expensive and time-consuming sewing operations resulting from prior art methods of fabricating borders from more than one panel.

The invention further resides in a novel method of fabricating knit garments with knit-in pockets wherein the pockets are defined by the outer knit layer of the garment and a single inner layer integrally connected to the outer layer along three sides thereof. The pockets are provided with an opening from either the inside or outside of the garment.

It is therefore an object of this invention to provide a method for fabricating knit panels for use in manufacturing sweaters of the button- or zipper-front type with a continuous border devoid of seams in the neckline.

It is a further object of this invention to provide a method for fabricating knit panels for use in manufacturing sweaters of the button- or zipper-front type with a continuous border wherein said border is defined by an edge of said knit panel.

It is a further object of this invention to provide a method for fabricating knit panels for use in manufacturing sweaters of the button- or zipper-front type which eliminates time-consuming and expensive connection operations between separate panels to define a border around the neck and front edges of said sweater.

It is a further object of this invention to provide a method for fabricating a knit garment with a knit-in pocket which eliminates the dangling-type pocket or sewn-in patch pocket.

It is a further object to provide a method for fabricating a knit garment with a knit-in pocket which is only two layers thick in the pocket region.

It is a further object of this invention to provide a method for fabricating a knit garment with a knit-in pocket which is defined between an outer panel of the garment and a second panel disposed behind said outer panel.

It is a further object of this invention to provide a method for fabricating a knit garment with a knit-in pocket, said garment having only two layers in the pocket region, and said pocket being completely enclosed along three sides thereof.

Other objects and advantages of the invention will become apparent by referring to the following description and claims of the preferred embodiments thereof, taken in conjunction with the accompanying drawing, wherein like reference characters refer to similar parts throughout the several view and in which:

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a front view of a sweater of the button- or zipper-front type including a knit panel made according to the method of this invention.

FIG. 2 is a perspective view of a cylindrical knit garment having a knit design along the lower edge thereof.

FIG. 3 is a view of the knit garment of FIG. 2 after it has been folded and turned through 90°, said garment being shown with a cutting pattern placed thereon.

FIG. 4 is a view of the panel formed by cutting the garment along the pattern shown in FIG. 3 and unfolding the cut doubled material.

FIG. 5 is a front elevational view of a portion of a knit panel or strip having a knit-in pocket sealed along the top, bottom and both sides.

FIG. 6 is a rear elevational view of the portion of the knit panel or strip of FIG. 5.

FIG. 7 is a view of the garment portion of FIG. 5 showing the top course being cut to expose the knit-in pocket interior.

FIG. 8 is a front view of the garment portion similar to FIG. 7 with a welt applied to the marginal edge defining the opening into the pocket.

FIG. 9 is a cross-sectional view taken along line 9—9 of FIG. 5, looking in the direction of the arrows.

FIG. 10 is a cross-sectional view taken along line 10—10 of FIG. 5, looking in the direction of the arrows.

FIG. 11 is a cross-sectional view taken along line 11—11 of FIG. 8, looking in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, a knit sweater 10 of the button- or zipper-front type is comprised of a body fabric 12 and a decorative border 14. The portion of the sweater enclosed by the stitch lines 40, 42 represents a single panel 24 manufactured according to the method of this invention. The fabric 12 is finished with a decorative, continuous border 14 about an edge thereof in well-known manner utilizing a circular double-bed transfer machine or a double-bedded flat machine, said border being devoid of any seams.

The first step in the novel method of this invention is to fabricate a knit cloth 12 with a knit bottom tail in the usual manner. Instead of using the bottom tail horizontally, it is employed vertically as the border 14. The cloth can be manufactured on most commonly employed machines and the knit cloth, including the border, can be made from most type of stitches, including various designs.

Referring to FIG. 2, a plain links and links knit body fabric 12 is shown with a links and links border knit 14. This fabric can be in cylindrical form on a six-feed Wildman Jacquard Links and Links machine (not shown) set up for example, with six ends of Orlon for the body fabric and twelve ends for the border, it being understood that the number of ends can be varied depending on the desired thickness of the body fabric and border. The fabric is knit in a manner normally utilized to knit fabrics with a bottom tail.

The cylindrical knit cloth shown in FIG. 2 is severed along the dashed line 16 substantially parallel to the axis of the cylinder, and the cloth is folded along a substantially vertical

line **18** which is parallel and diametrically opposed to the cut line **16**. The resulting product is then vertically disposed as shown in FIG. **3** and comprises a double layer of cloth with the decorative border **14** disposed along the left side edge of both layers in overlying relation.

After the cloth **12** has been folded, a pattern **20** is placed thereon and the cloth is cut along the edge **22** of said pattern. As can be seen in FIG. **3** the cloth is cut without interfering with the continuity of the border at the fold **18**.

After the pattern has been cut through the cloth, the double layer cloth is unfolded to provide a finished panel **24** having a continuous border **14**. (See FIG. **4**) The sweater can be completed by various conventional sewing and cutting processes wherein additional panels are connected to the panel **24** in well-known manner.

It is understood that when the initial cloth is knit on a float bed machine, it is simply folded double and it need not be severed.

A second aspect of this invention is in providing a novel method for producing knit-in pockets on knit items such as sweaters, shirts, vests, dresses, scarfs, and the like. The knit-in pockets can be produced on most automatic-powered flat and circular-knitting machines, such as double bed or Jacquard Links and Links machines.

A selected group of high- and low-butt needles or high- and low-butt jacks (not shown) are arranged for producing a pocket of desired width, as for example 50 needles, by utilizing Jacquard cards or any well-known electrically controlled devices available for this purpose in the usual manner. Initially, the desired color combinations are set up on the top of the machine where the main control card is located to thus determine the length and width. These sets of needles and/or jacks are thus controlled to knit the tail **60** which is the bottom part of the sweater construction by knitting conventionally, as for example one and one rib, two and one rib, three and one rib or any other desired rib. Knitting the body **28** continues in the usual manner up to the knit-in pocket **26** by utilizing for example, a two and two half-cardigan stitches all around the machine up to the bottom **42** of the pocket **26**.

At the bottom **42** of the pocket **26**, the two and two half-cardigan stitches continues to knit the single body panel **28** with the exception of a selected number of needles, for example 50, which are selected at the pocket location of the sweater being fabricated and the number of which may be varied to knit either wider or narrower pocket configurations. The 50 needles selected for knitting the pocket construction, either high butt or low butt, depending upon the machine being utilized, are arranged in well-known manner to knit tubular. On a flat-bed machine, this would mean knitting both the front bed and the back bed in the area defining the top **40**, bottom **42** and sides **44**, **46** of the pocket **26**. Preferably, the front panel **56** of the tubular pocket **26** is knitted to conform to the remainder of the fabric **28** so that no distinction may be made between the balance of the fabric **28** and the front pocket panel **56** when viewed from the front. The rear panel **58** of the pocket **26** may be knitted jersey on the rear bed to thus define a pocket **26** between the front and rear panels **56**, **58** of the tubular knitted pocket area. When the predetermined pocket height is reached, the machine is set in well-known manner to knit only the half-cardigan stitch by eliminating the tubular stitch.

The resulting product is a two-layer completely enclosed pocket **26** with knitted fabric **28** surrounding the said pocket.

If it is desired to provide a pocket opening from the outside of the garment, the last outside course **30** on the top of the tubular pocket **26** is cut or slit along the line **31** with a scissors **48** or like tool, from the first needle or wale **50** of the tubular course to the last needle or wale **52** (FIG. **7**), to provide a pocket opening **54**.

After the top course **30** is cut, any type of welt or edging **32** (FIG. **8**) can be applied to the marginal edge of the opening **54** defined by the cutting of the course **30** by utilizing conventional knitting machines in the usual manner. The resulting product is a knit cloth having a pocket defined by two-knit layers **56**, **58**. The back portion **58** of the pocket tubular construction that remains uncut does not unravel because of the face that it is continuous knitted. From the half-cardigan stitch and the half-cardigan to the tubular stitch to the jersey stitch does not unravel after cutting the top pocket course **30** because it is a continuation of the back, continuing either into the half-cardigan or other similar stitch which may be employed. The top **31** of the front panel **56** can unravel after cutting and it is therefore necessary to apply the welt **32**.

If it is desired to provide a pocket opening from the inside of the garment, the last inside course on the top of the tubular stitch may be cut or slit, in the same manner as described with respect to constructing a pocket opening from the outside of the garment.

I claim:

1. A method of fabricating a sweater including a knit panel having a continuous knit-on border along an edge thereof, said edge constituting the neckline and front edges of a button- or zipper-front type sweater, comprising the steps of:

A. knitting a cloth having a continuous knit-on border along an edge thereof;

B. folding the cloth double along a fold line substantially perpendicular to said edge; and

C. cutting through the double layer cloth along a line extending in the direction of said edge without interfering with the continuity of the border at the foldline to form the knit panel having said continuous knit-on border.

2. The method according to claim **1**, comprising the additional steps of placing a pattern on the said doubled cloth prior to cutting, said pattern having a configuration of one-half of the desired knit panel and said double cloth layer being cut to conform to the shape of the pattern.

3. The method according to claim **2**, wherein said pattern covers said border continuous with said foldline.

4. The method of claim **1**, wherein said knit cloth is knitted in the configuration of a cylinder open at each end with the border positioned along one circular end thereof, said cylinder being folded along a foldline substantially perpendicular to said circular end and being severed along a line substantially perpendicular and diametrically opposed to said foldline, whereby a double-layer cloth is formed having a border along an edge of each layer substantially perpendicular to said foldline.

5. The method of claim **1**, wherein said knit cloth is in the form of a flat panel.